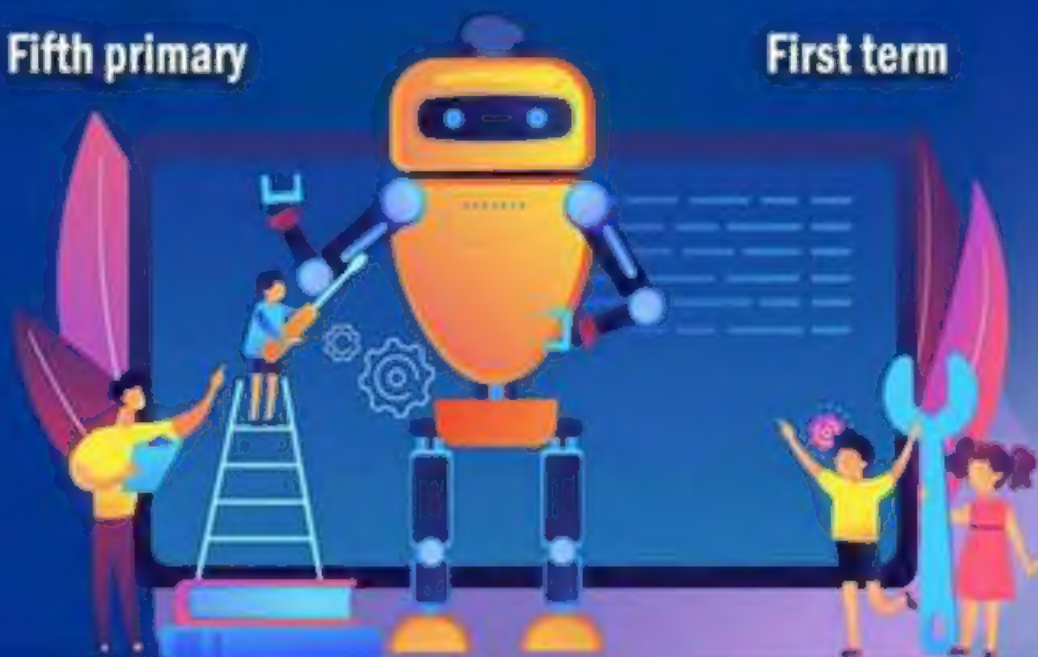# Information and Communication Technology

**2022-2023**

**Fifth primary**

**First term**



## Theme1

## Role of Information and Communication Technology (ICT) in our lives

Lesson 1 Explorer in Action

Lesson 2 Computer accessories

Lesson 3 Networks

Lesson 4 Digital communication tools

Lesson 5 Internet connection problems and solutions

Lesson 6 Digital file management

Lesson 7 Information search strategies

Lesson 8 Sharing information

# SPOTLIGHT on Theme 1

In this theme, you will learn about how different computer networks communicate,
how to troubleshoot common computer hardware and software problems,
and how to use ICT tools effectively and efficiently.
You will also create a spreadsheet to share information that you've found while researching online, making use of what you have learned.

## Theme1 :Role of Information and Communication Technology (ICT) in our lives

Lesson 1 Explorer in Action

Lesson 2 Computer accessories

Lesson 3 Networks

Lesson 4 Digital communication tools

Lesson 5 Internet connection problems and solutions

Lesson 6 Digital file management

Lesson 7 Information search strategies
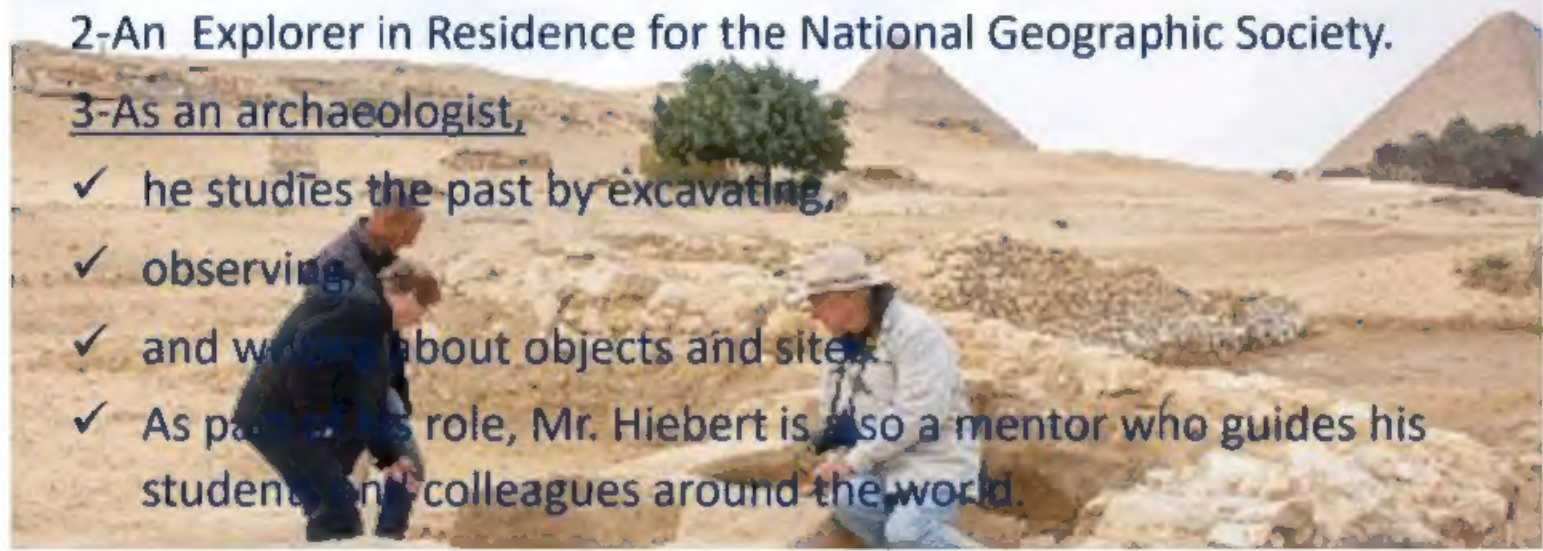
Lesson 8 Sharing information

**Fred Hiebert is:**

1- An archaeologist and explorer.

2-An Explorer in Residence for the National Geographic Society.

3-As an archaeologist,

✓ he studies the past by excavating,

✓ observing,

✓ and writing about objects and sites.

✓ As part of his role, Mr. Hiebert is also a mentor who guides his students and colleagues around the world.

**In his daily work, Mr. Hiebert uses:**

1-The Word processor program (Word) to write reports,

2-The Excel spreadsheet program to prepare and show graphs,

3-The PowerPoint presentation program to present the results of his research to his team.

4-Printed letters and e-mails when he wants to communicate more formally, or he hands over documents in person.

## Virtual meetings

As part of his role, Mr. Hiebert is also a mentor who guides his students and colleagues around the world.

Mr. Hiebert generally prefers to communicate with people through face-to-face, in-person meetings.

At times, this is not possible because he is away on an expedition, or the people he is meeting with are in different countries

In such cases, Mr. Hiebert holds **virtual meetings** using platforms like **Zoom** and **WhatsApp**.

These meetings must be scheduled at a time that is suitable for everyone.

## Exercise 1:

### Complete: -

_1-Fred Hebert used some ICT tools in his daily work, such as

Word prossing , Excell spreed sheet , Power point presentation .and E_mail .

2- Word prossing . is a program used to write reports.

3- Excell spreed sheet is a program used to create graphs.

4- Power point presentation is a program used to prepare presentations.

5-Dr. Hebert held virtual meetings using platforms like Zoom

And.. Whats App

---

## Exercise 1:

### Put (V) or (×): -

1-Dr. Hebert doesn't use any ICT tools in his day-to-day life. (X)

2-Dr. Hebert uses platforms like Zoom and WhatsApp to communicate with people. (V)

3-PowerPoint is a program used for writing reports. (X)

4-Dr. Hebert uses word and Excel programs to communicate formally. (X)

5- Dr. Hebert guided his students and colleagues all around the world. (V)

6-ICT tools made our day-to-day life harder. (X)

7-Word is a program for spreadsheets.

Like Mr. Hiebert, you can use ICT tools to share ideas. However, your computer's hardware must be working properly.

**Router**: a device that connects a computer the internet via Wi-Fi or ethernet

**ethernet cable**: a cable that connects a computer or laptop to a router.

cable : a long connector that transmits data or power between devices.

**ethernet port** connects an ethernet cable; ethernet is more stable and faster than Wi-Fi

## Flash Memory :

is an electronic non-volatile computer memory storage medium that can be electrically erased and reprogrammed.

## External Hard Drive:

Like Hard disk drive but much faster.

## HDMI (high-definition multimedia interface):

a cable that transmits audio and video from/ to devices

## Units of measurement:

bit: the smallest unit of data

byte: 1 byte = 8 bits = 1 character; the word 'cat' has three letters and would need three bytes.

```
            byte            bit
C  =  0  1  0  0  0  0  1   1
A  =  0  1  0  0  0  0  0   1
T  =  0  1  0  1  0  1  0   0
                    bit
c  =  0  1  1  0  0  0  1   1
a  =  0  1  1  0  0  0  0   1
t  =  0  1  1  1  0  1  0   0
```

Byte = 8 bits = 1 character

## Units of measurement:

bit: the smallest unit of data

byte= 8 bits

Kilobytes=1,024 (B)

Megabyte (Mb)= 1,024 (KB)

Gigabyte (Gb)= 1,024 (MB)

Terabyte= 1,024 (GB)

Types of Units of Storage

Bit
Byte
Kilobyte
Megabyte
Gigabyte
Terabyte

## Mbps:

Megabits per second; measures the speed of a network or internet connection (the faster the speed, the better)
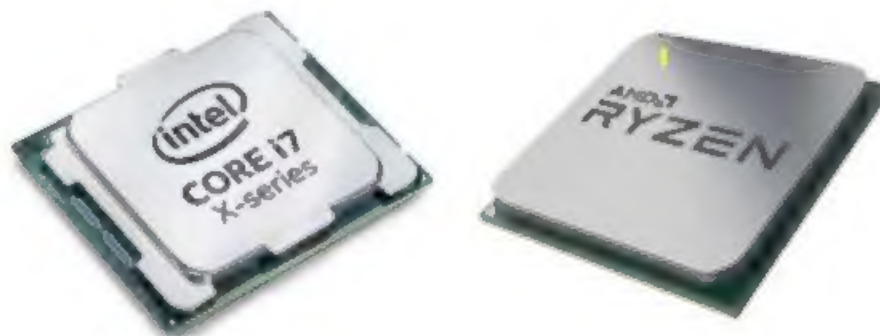
## GHz (GigaHertz):

Measures the number of cycles your CPU carries out per second; the higher the number, the faster the speed

## Potential computer problems and solutions:

| Problem | Potential reason | solution |
|---|---|---|
| 1- Trouble processing large files, like a big PowerPoint presentation | Not enough graphics storage | shut down some programs |
| 2- A poor video-conference connection | Slow wireless internet connection | try an ethernet connection |
| 3- Not able to store files | Not enough space | move old files to an external drive |
| 4- Home internet connection not working | connection interrupted | use ethernet or contact ISP |

### Exercise 2:

Complete: -

1-Some of the computer accessories are.. Ethernet port , Flash memory and. External hard drive

2-. Ethernet cable . is a cable that connects a **computer** or **laptop** to a router.

3-. HDMI is a cable that transmits audio and video from\to devices.

4-. router is a **device** that connects a computer to the internet via Wi-Fi or Ethernet.

5- bit , byte , K.b ., M.b ,.. G.b ..and. T.b are some of the computer's units of measurement.

## Engage

What does the word network mean to you?
How many networks, digital or otherwise, do you think
you have, or you have dealt with?

## Networks

They are groups of people, or things, that are
connected to each other for a common purpose.

**Computer networks** connect computers with each
other, to share important information and data.

COMPUTER NETWORKS

# 1- Local Area Network (LAN).

A computer connected to another computer or device such as a printer or router, you may have your own personal computer network at home you have.
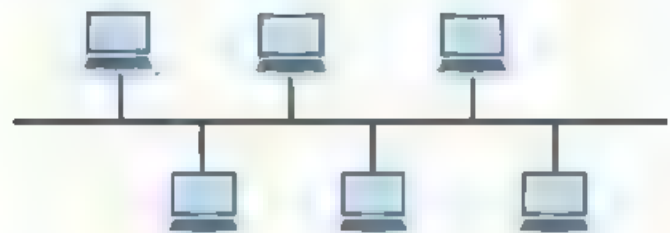
Printer

USB Modem

Laptop A

Laptop B

# 2-A closed network

Such as one in a computer lab, may only have computers linked by cables to allow for file sharing.

### 3-The intranet

Unlike the internet, is private, restricted to only those that are part of the business, school, or organization that it is connecting.

# INTRANET

ACCESS    COLLABORATION    DATA    COMMUNICATION    PRIVATE NETWORK    INFORMATION

### 4-The internet is a network that connects computers, and the people using them, from all around the world.
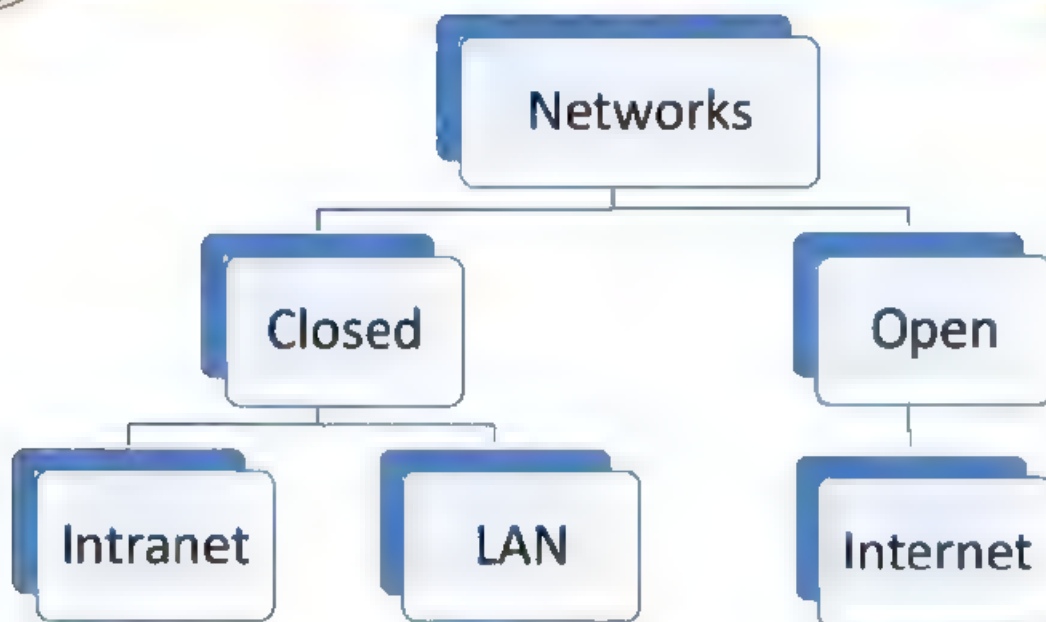
## What do you need to connect your computer to the internet?

**1-A gateway, such as a router.**

gateway a means access to something

**2-ISP (Internet Service Provider),**

such as Egyptian companies to citizens. المصرية للاتصالات

we

Networks

Closed

Open

Intranet

LAN

Internet

Them 1 Lesson 1

...........................is a program used to write reports. * (1 Point)
E-mails
The PowerPoint presentation
The Excel spreadsheet
The Word processor program

Fred Hebert used some ICT tools in his daily work, such as .............................. *
(1 Point)
All of them
The PowerPoint presentation
The Word processor program

E-mails
The Excel spreadsheet

........................................ is a program used to create graphs * (1 Point)
All of them
E-mails
The PowerPoint presentation
The Excel spreadsheet
The Word processor program

........................................ is a program used to prepare presentations. * (1 Point)
The Excel spreadsheet
The PowerPoint presentation
All of them
E-mails
The Word processor program

Dr. Hebert doesn't use any ICT tools in his day-to-day life. * (1 Point)
False

True

Dr. Hebert uses platforms like Zoom and WhatsApp to communicate with
people. * (1 Point)
True
False

PowerPoint is a program used for writing reports. * (1 Point)

True
False

Dr. Hebert uses word and Excel programs to communicate formally. *
(1 Point)
False
True

Dr. Hebert guided his students and colleagues all around the world. * (1 Point)
True

False

ICT tools made our day-to-day life harder. * (1 Point)
False
True

Word is a program for spreadsheets. * (1 Point)
True
False

Them 1 Lesson 2
Please select 3 options.

1-Some of the computer accessories are......................,.................. * (1
Point)
Ethernet port
Flash memory
External hard drive
byte

........................ is a cable that connects a computer or laptop to a router. *
(1 Point)
External hard drive
Byte

Ethernet cable
Ethernet port

............ is a cable that transmits audio and video from\to devices. * (1 Point)
Ethernet cable
HDMI (high-definition multimedia interface):
External hard drive

Ethernet port

4-............ is a device that connects a computer to the internet via Wi-Fi or Ethernet. * (1 Point)

Router
byte
External hard drive
Ethernet port
Terabyte (Tb)
Megabyte (Mb)

Rearange the measurment units from the smallest to the largest * (1 Point)

Gigabyte (Gb)
Kilobytes (Kb)
byte
bit

Flash memory is a cable that connects a computer or laptop to a router * (1 Point)

False
True

Ethernet is better than Wi-Fi connection. * (1 Point)

True
False

Them 1 Lesson 3

..................... is a network that connects computers, and the people using them,
from all around the world. * (1 Point)

The intranet
Closed
The internet
Local Area Network (LAN).

..................... is a private type of network, restricted to only those that are part of the business, school, or organization that it is connecting. * (1 Point)

The internet
Route

The intranet
WWW

Please select 2 options.

23

……………and………………..are different types of networks . * (1 Point)

Opened

Closed

WWW

Router

24

An intranet is a network that connects computers, and the people using them, from all around the world. * (1 Point)

True

False

25

A gateway is a gate used to connect a computer to the internet. * (1 Point)

True

False

26

Only the router connects a computer to the ISP. * (1 Point)

True

False

27

The internet is a limited network. * (1 Point)

False

True

28

Egyptian knowledge bank is available for free to all Egyptians who register on the site. * (1 Point)

False

True

# The answers

Them 1 Lesson 1

3

…………………….is a program used to write reports. * (1 Point)

E-mails

The PowerPoint presentation

The Excel spreadsheet

The Word processor program  ·

4

Fred Hebert used some ICT tools in his daily work, such as ………………………  *

(1 Point)
All of them  ·
The PowerPoint presentation
The Word processor program
E-mails
The Excel spreadsheet

5
................................................ is a program used to create graphs * (1 Point)
All of them
E-mails
The PowerPoint presentation
The Excel spreadsheet  ·
The Word processor program

6
................................................ is a program used to prepare presentations. * (1 Point)
The Excel spreadsheet
The PowerPoint presentation  ·
All of them
E-mails
The Word processor program

7
Dr. Hebert doesn't use any ICT tools in his day-to-day life. * (1 Point)
False  ·
True

8
Dr. Hebert uses platforms like Zoom and WhatsApp to communicate with people. * (1 Point)
True  ·
False

9
PowerPoint is a program used for writing reports. * (1 Point)
True
False  ·

10
Dr. Hebert uses word and Excel programs to communicate formally. *
(1 Point)
False  ·
True

11
Dr. Hebert guided his students and colleagues all around the world. * (1 Point)
True  ·
False

12

ICT tools made our day-to-day life harder. * (1 Point)

False ·

True

Word is a program for spreadsheets. * (1 Point)

True

False ·

Them 1 Lesson 2

1-Some of the computer accessories are...................................,...................... * (1 Point)

Ethernet port ·

Flash memory ·

External hard drive ·

byte

........................ is a cable that connects a computer or laptop to a router. * (1 Point)

External hard drive

byte

Ethernet cable ·

Ethernet port

............. is a cable that transmits audio and video from\to devices. * (1 Point)

Ethernet cable

HDMI (high-definition multimedia interface): ·

External hard drive

Ethernet port

4-............ is a device that connects a computer to the internet via Wi-Fi or Ethernet. * (1 Point)

Router ·

byte

External hard drive

Ethernet port

1 Terabyte (Tb)

2 Gigabyte (Gb)

3 Megabyte (Mb)

4 byte

5 Kilobytes (Kb)

6 bit